JOINT COMPUTER-AIDED ACQUISITION AND LOGISTICS SUPPORT (JCALS) SYSTEM

Army ACAT IAM Program

Total Number of Systems:	1
Total Program Cost (TY$):	$450M
Average Unit Cost (TY$):	$450M
Full-rate production:	1QFY01

Prime Contractor

Computer Sciences Corporation (CSC)

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Joint Computer-Aided Acquisition and Logistics Support (JCALS) System will become an integral part of ***Joint Vision 2010*** and its concept of ***focused logistics*** support. Focused Logistics requires systems that are responsive, flexible, and precise. JCALS will enable DoD to more effectively manage, acquire, improve, publish, and distribute technical manuals for the Services.

JCALS is a multi-Service, geographically distributed client-server digital system. It is designed to process all data and information required to manage, control, and produce each Service's technical manuals at designated processing sites. The Defense Information Systems Network provides wide area network connectivity. The Fiber-optic Distributed Data Interface Ethernet will provide local area network connectivity among workstation servers, workstations, peripherals, collocated legacy systems,

and the wide area network. Each functional user site has one or more JCALS client-server nodes based on the site's processing requirements and organizational dispersal. All JCALS data are stored in the Integrated Weapon System data base - a logically centralized, physically distributed relational data base. The Global Data Management System provides data management and access. The system's operational and support capability provides overall JCALS system management. The functional user performs system administration at each site.

BACKGROUND INFORMATION

An initiative to develop a paperless technical and logistics information system for weapon systems began in 1986 with the Army Computer Aided Logistics Support (CALS) program. Due to the burden of excessive paper processing encountered during M-1 tank development, the Army decided to automate the process. In 1991, the CALS program expanded to all of the Services and was renamed the Joint CALS (JCALS) program.

The JCALS program is developing the infrastructure to logistically support weapons systems throughout their life cycle. The first application will manage, acquire, update, publish, stock, and distribute each Service's technical manuals.

The JCALS program office will specify, acquire, implement, and field JCALS architecture and interfaces to a supporting system. This will satisfy the Services and Defense Logistics Agency's needs for integrated digital technical information. The JCALS program is following an incremental fielding strategy.

The first JCALS increment approached Initial Operational Testing in 1996 on two separate occasions. The Army's Test and Experimentation Command sponsored an Operational Test Readiness Review in April, followed by another in June. During each test readiness review, it was clear that problems discovered during DT would preclude a successful operational test. Later in 1996, JCALS went through a Limited User Test. The results indicated that JCALS was immature and that there were significant shortfalls in training.

In January and February 1998, the Test and Experimentation Command conducted an Initial Operational Test on JCALS hardware and the first JCALS software increment, Software Package #2. Testing complied with the TEMP approved by DOT&E in May 1997. The testing was at 12 Service sites and the System Operational and Support Capability Center. The focus of the test was to examine technical manual activities at the Service test sites and management/administration capabilities at the System Operational and Support Capability Center. Over 500 users tested Software Package #2 using free-play exercises and scripted scenarios. Users pre-loaded the technical manual data bases and scanned technical manuals containing supporting management data. JCALS operational testing revealed concerns with effectiveness and suitability affecting all four Services. There were additional effectiveness issues related to the Air Force's unique applications. Y2K compliance was also demonstrated.

In May 1998, the program implemented fixes for the effectiveness issues common to all four Services. After a short test period, results indicated that the fixes were satisfactory. In addition, the two suitability issues common to all four Services were adequately addressed. Based on IOT&E results and follow-on assessments, OPTEC and DOT&E concluded that JCALS was operationally effective for the Army, Navy, and Marine Corps, but not for the Air Force. An acquisition decision memorandum for JCALS Software Package #2 was issued in August 1998 that authorized the fielding of JCALS Software

Package #2 to Army, Navy, and Marine Corps sites. In addition, the memorandum directed the JCALS program to correct JCALS deficiencies identified for the Air Force.

Besides Software Package #2 issues, the acquisition decision memorandum directed that JCALS Software Package #3 undergo a formal operational test. Software Package #3 provides the core functionality of the JCALS technical manual's application.

TEST & EVALUATION ACTIVITY

In November 1998, follow-on evaluation of JCALS' "modified Software Package #2" was initiated to verify corrections to the two Air Force issues and demonstrate Y2K compliance. There were a myriad of assessments throughout 1999 by OPTEC to determine the resolution of Air Force issues. Finally, in November, Army and Air Force test agencies determined that JCALS Software Package #2 was operationally effective and suitable.

TEST & EVALUATION ASSESSMENT

Although the system was deemed operationally effective and suitable, testing uncovered operational limitations to the Air Force technical manual process. JCALS interoperability limitations with Air Force legacy systems caused backlog and throughput problems. To mitigate these problems, the Air Force has instituted continuos monitoring and periodic manual intervention. Another limitation was with the distribution label generation process. This has also been overcome by utilizing workarounds. These limitations, as well as other minor problems, are to be addressed in JCALS Software Package #3 (now under development). This increment will undergo a formal operational test before full fielding is granted.